

Amendments to the Claims

Please amend claims 1, 7-11, 13, 26-29, 30-32, 41-42, and 44-45 as indicated below. The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for metering determining a delivered volume of aerosol to be delivered based on for comparison with a pre-determined volume of the aerosol comprising:

receiving a signal associated with light scattering from a first aerosol that is associated with a first airflow;

receiving a signal representing the first airflow; and

calculating a volume of the first aerosol, the calculation being based at least on the signal associated with light scattering from the first aerosol and the signal representing the airflow[.]; and

metering subsequently delivered amounts of the aerosol, based on the calculated volume.

2. (original) The method of claim 1, further comprising:

receiving a signal associated with light scattering from a second aerosol that is associated with a second airflow;

receiving a signal representing the second airflow;

calculating a volume of the second aerosol, the calculation being based on the signal associated with light scattering from the second aerosol and the signal representing the second airflow; and

outputting a signal associated with a comparison of the volume of the first aerosol and the volume of the second aerosol.

3. (original) The method of claim 2, wherein the output signal includes information for metering a third aerosol.

4. (previously presented) The method of claim 2, wherein the first airflow is associated with inhalation, and the second airflow is associated with exhalation.

5. (original) The method of claim 2, wherein the second aerosol includes a subset of the first aerosol.

6. (cancelled).

7. (currently amended) A computer program product for use on a computer system
storage medium containing instructions for determining a delivered volume of aerosol for
comparison with a pre-determined volume of aerosol, the computer program product
comprising a computer readable storage medium having computer readable program code
thereon, the computer readable program code causing a processor to ~~to cause a processor~~
to

receive a signal associated with light scattering from a first aerosol that is associated with a first airflow;

receive a signal representing the first airflow; and

calculate a volume of the first aerosol, the calculation being based at least on the signal associated with light scattering from the first aerosol and the signal representing the first airflow{.]; and

output a signal for metering subsequently delivered amounts of aerosol.

8. (currently amended) The computer program product storage medium of claim 7, wherein the computer-readable program code further causes the processor to the medium storing further instructions to

receive a signal associated with light scattering from a second aerosol that is associated with a second airflow;

receive a signal representing the second airflow;

calculate a volume of the second aerosol, the calculation being based at least on the signal associated with light scattering from the second aerosol and the signal representing the second airflow; and

output a signal associated with a comparison of the volume of the first aerosol and the volume of the second aerosol.

9. (currently amended) The computer program product storage medium of claim 8, wherein the output signal includes information for metering a third aerosol.

10. (currently amended) The computer program product storage medium of claim 8, wherein the first airflow is associated with inhalation, and the second airflow is associated with exhalation.

11. (currently amended) The computer program product storage medium of claim 8, wherein the second aerosol includes a subset of the first aerosol.

12. (cancelled).

13. (currently amended) An apparatus comprising:

a detector operable to detect light originating at a light source and scattered by an aerosol;

a sensor operable to determine a pressure of an the aerosol; and

a processor coupled to the detector and the sensor, the processor configured to receive a signal associated with light scattering from a first aerosol that is associated with a first airflow;

receive a signal representing the first airflow from the sensor; and

calculate a volume of the first aerosol, the calculation being based on the signal associated with light scattering from the first aerosol and the signal representing the first airflow.

14. (original) The apparatus of claim 13, wherein the processor is further configured to

receive a signal associated with light scattering from a second aerosol that is associated with a second airflow;

receive a signal representing the second airflow;

calculate a volume of the second aerosol, the calculation being based on the signal associated with light scattering from the second aerosol and the signal representing the second airflow; and

output a signal associated with a comparison of the volume of the first aerosol and the volume of the second aerosol.

15. (original) The apparatus of claim 14, further comprising dose-selection means coupled to the processor, and wherein the output signal can be received by the dose-

selection means, and wherein the output signal includes information useful for metering a third aerosol.

16. (original) The apparatus of claim 14, wherein the output signal includes information for metering a third aerosol.

17. (original) The apparatus of claim 13, further comprising a light source.

18. (original) The apparatus of claim 13, wherein the first airflow is associated with inhalation, and the second airflow is associated with exhalation.

19. (original) A method comprising:

receiving a first signal associated with light scattering from a first aerosol that is associated with a first airflow;

receiving a second signal associated with light scattering from a second aerosol that is associated with a second airflow; and

outputting an output signal associated with a comparison between the first signal and the second signal.

20. (original) The method of claim 19, further comprising receiving a signal representing at least one of the first airflow and the second airflow, and wherein the output signal is further associated with at least one of the first airflow and the second airflow.

21. (original) The method of claim 20, wherein the output signal includes information for metering a third aerosol.

22. (original) The method of claim 20, wherein the first airflow is associated with inhalation, and wherein the second airflow is associated with exhalation.

23. (original) The method of claim 19, wherein the second aerosol includes a subset of the first aerosol.

24. (original) The method of claim 19, wherein the scattering is due to diffraction.

25. (original) The method of claim 19, wherein at least one of the first signal and the second signal includes information about particle size.

26. (currently amended) A computer program product for use on a computer system, the computer program product comprising a computer readable storage medium having computer readable program code thereon, the computer readable program code causing a processor to storing instructions to cause a processor to

receive a first signal associated with light scattering from a first aerosol that is associated with a first airflow;

receive a second signal associated with light scattering from a second aerosol that is associated with a second airflow; and

output an output signal associated with a comparison between the first signal and the second signal.

27. (currently amended) The computer program product medium of claim 26, wherein the computer readable program code further causes the processor to instructions further comprising receiving receive a signal representing at least one of the first airflow and the second airflow, and wherein the output signal is further associated with at least one of the first airflow and the second airflow.

28. (currently amended) The computer program product medium of claim 27, wherein the output signal includes information for metering a third aerosol.

29. (currently amended) The computer program product medium of claim 27, wherein the first airflow is associated with inhalation, and wherein the second airflow is associated with exhalation.

30. (currently amended) The computer program product medium of claim 26, wherein the second aerosol includes a subset of the first aerosol.

31. (currently amended) The computer program product medium of claim 26, wherein the scattering is due to diffraction.

32. (currently amended) The computer program product medium of claim 26, wherein at least one of the first signal and the second signal includes information about particle size.

33. (original) An apparatus comprising:

a detector operable to detect light originating at a light source and scattered by an aerosol; and

a processor coupled to the detector, the processor configured to
receive a first signal associated with light scattering from a first aerosol
that is associated with a first airflow;

receive a second signal associated with light scattering from a second
aerosol that is associated with a second airflow; and

output an output signal associated with a comparison between the first
signal and the second signal.

34. (original) The apparatus of claim 33, wherein the processor is further configured to receive a signal representing at least one of the first airflow and the second airflow.

and wherein the output signal is further associated with at least one of the first airflow and the second airflow.

35. (original) The apparatus of claim 34, further comprising dose-selection means coupled to the processor, and wherein the output signal is received by the dose-selection means, and wherein the output signal includes information for metering a third aerosol.

36. (original) The apparatus of claim 35, further comprising the light source.

37. (original) The apparatus of claim 33, wherein the second aerosol includes a subset of the first aerosol.

38. (original) The apparatus of claim 33, wherein the scattering is due to diffraction.

39. (original) The apparatus of claim 33, wherein the first airflow is associated with inhalation, and wherein the second airflow is associated with exhalation.

40. (original) The apparatus of claim 33, wherein at least one of the first signal and the second signal includes information related to particle size.

41. (currently amended) A method for metering an ~~determining a delivered~~ amount of aerosol to be delivered based on ~~for~~ comparison with a pre-determined amount of the aerosol comprising:

receiving a first input signal associated with a scattering event with a first aerosol;

receiving a second input signal associated with a scattering event with a second aerosol;

receiving a third input signal associated with a flow rate of at least one of the first aerosol and the second aerosol; and

determining metering a net amount of aerosol transferred; ~~the determination based~~ on the first input signal and the second input signal and the third input signal.

42. (currently amended) The method of claim 41, further comprising outputting an output signal associated with the ~~determination of the metered~~ net amount of aerosol transferred, the output signal including information for metering a third aerosol.

43. (original) The method of claim 42, further comprising receiving the output signal.

44. (currently amended) A computer program product for use on a computer system,
the computer program product comprising a computer readable storage medium having
computer readable program code thereon, the computer readable program code causing
containing instructions to cause a processor to

receive a first signal associated with light scattering from a first fluid that is associated with a first airflow;

receive a second signal associated with light scattering from a second fluid that is associated with a second airflow;

receive a third signal associated with at least one of the first airflow and the second airflow; and

output an output signal associated with a difference between the first signal and the second signal.

45. (currently amended) The computer program product medium of claim 44, wherein the output signal includes information for metering a third fluid.